

**Questions and Answers on Hepatitis C Virus  
(HCV) Infection  
Public Health-Seattle & King County  
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**What is hepatitis C?** Hepatitis C is one of several viruses that cause viral hepatitis. Other viruses that cause hepatitis are hepatitis A, B, D, and E viruses. Hepatitis means inflammation of the liver. Hepatitis viruses A, B, C, D, and E are not related and have differences in the ways they are spread and the type of disease they cause. Some of the viruses are spread by similar behaviors, especially hepatitis B and C viruses. Hepatitis C virus was previously called non-A, non-B hepatitis. There are many closely related types of hepatitis C viruses. Infection with one strain of hepatitis C does not provide protection from infection with differing types.

**What are the symptoms of hepatitis C infection?** Most people with hepatitis C do not know they are infected, have no symptoms, and lead normal lives. After a person is infected with hepatitis C virus it takes several weeks to months before the infection becomes established in the liver. This is called the incubation period. After the incubation period the infection becomes established and tests of liver function may become abnormal, or elevated. Elevated liver tests may last for various lengths of time, even many years. Sometimes liver tests vary between normal and elevated at different times. Persons infected with hepatitis C can transmit the infection to others even if their liver tests are normal. If liver cells are damaged by the virus symptoms may be present. Symptoms are usually mild and flu-like, with nausea, fatigue, loss of appetite, fever, headaches, and abdominal pain. Jaundice (yellowing of the eyes or skin) is not common but may occur. Fatigue or feeling tired may be the most common symptom of chronic hepatitis C infection.

**How serious is hepatitis C?** Most persons infected with hepatitis C carry the virus for the rest of their lives. Most of these persons have some liver damage from the infection, but not enough to make them sick. About 20% or more of infected persons may develop scarring of the liver (this is called cirrhosis) over many years. Some persons with cirrhosis have no long-term effects but others may develop liver failure and other complications. Persons with immune suppression such as HIV infection may have a more rapid progression of liver disease.

**How is hepatitis C infection diagnosed?** Hepatitis C infection is usually diagnosed in two steps using blood tests. The first step consists of a screening test currently called ELISA-2, which detects hepatitis C antibody. Because in some situations (particularly in persons not at high risk for hepatitis C infection) the ELISA-2 is positive in the absence of

hepatitis C infection (false-positive), a second test or confirmatory test is needed. A positive ELISA screening test alone in persons without a history of injecting drug use (IDU) should not be considered diagnostic of hepatitis C infection without confirmatory testing. The second test may be another test for hepatitis C antibody called RIBA or a PCR test for hepatitis C virus in the blood.

In the case of injecting drug users a single blood test may be acceptable because the likelihood of HCV infection is so high. The hepatitis C screening blood test can take several weeks to months to become positive. Therefore, in cases in which a recent exposure to hepatitis C has occurred and the screening test is negative, HCV testing should be repeated in 3 or more months.

**How is hepatitis C spread?** Anyone infected with hepatitis C can transmit the infection, even if no symptoms are present. Hepatitis C is spread by exposure to human blood. It is not clear whether semen or saliva can transmit the virus. The virus can be spread through sexual intercourse although this is uncommon. There is no evidence hepatitis C is transmitted through breast milk. It may be transmitted by sharing needles, razors, toothbrushes, and nail files or clippers with an infected person. Hepatitis C can also be transmitted by contaminated tattooing, body piercing or acupuncture needles. Snorting cocaine has been associated with hepatitis C transmission. Although hepatitis C was transmitted through blood transfusions prior to 1992, blood products are currently screened for hepatitis C and transmission almost never occurs. A mother infected with hepatitis C transmits the infection to her child during pregnancy or at childbirth about 5% of the time.

**Is there a treatment for hepatitis C?** Currently, two medications are available for treatment of hepatitis C, interferon and ribavirin. Interferon treatment is given by injection, usually for a period of six months to one year. Ribavirin is taken by mouth and is approved for use in combination with interferon. About 15-20% of people respond to interferon and are apparently cured of the virus. Therapy with interferon and ribavirin may lead to cure in up to 40% of people, however long-term experience is limited with this combination treatment. Significant side effects can occur with interferon and ribavirin therapy and should be discussed with your health care provider before beginning treatment.

The decision to treat is made using results of liver tests, tests for the virus in blood (PCR), and usually a liver biopsy. Currently, treatment for hepatitis C is recommended for persons most likely to progress to complications and most likely to respond to therapy. This group includes persons with persistently abnormal liver tests, a positive test for hepatitis C virus in blood, and specific abnormalities on liver biopsy. The treatment of

hepatitis C is an area of active investigation and research. Consult with a physician for the most recent recommendations on treatment. Treatment for persons who do not meet the standard criteria for treatment may be possible through clinical studies.

**Is there a vaccine for hepatitis C?** There is no vaccine for hepatitis C. Vaccines are available for hepatitis B and hepatitis A. These vaccines are important to protect the liver from other hepatitis viruses, but do not protect against hepatitis C.

### **What do I need to know if I have hepatitis C?**

- Do not drink alcohol (including beer and wine). Alcohol can cause additional liver damage in persons with hepatitis C infection.
- Get vaccinated against hepatitis A and hepatitis B if you have not had these infections. These infections can cause serious liver damage in persons with hepatitis C infection.
- Establish a relationship with a medical provider who can check your liver function periodically.
- If you use injection drugs you can get re-infected with new hepatitis C viruses as well as other infections including HIV. If you shoot drugs, stop and get into a treatment program. If you can't stop, never reuse or share syringes, cookers, cotton, or water. Don't frontload or backload.
- Make sure your doctor knows all the medications you are taking, even over the counter medications and herbal medicines.
- Tylenol (acetamenophen) can cause liver damage in persons with chronic liver disease.
- Ibuprofen (Motrin, etc) has been associated with liver damage in persons with hepatitis C infection.
- Some herbal medicines, remedies and teas can also cause liver damage.
- Check with your health care provider before taking acetamenophen (Tylenol) or ibuprofen (Motrin) and before using herbal medicines.

### **To avoid spreading hepatitis C to others:**

- Do not donate your blood, body organs, other tissue, or sperm.
- Do not share toothbrushes, razors, nail clippers, or other personal care articles that might have your blood on them.
- Cover your open cuts or sores.
- If you shoot drugs, stop and get into a treatment program. If you can't stop, never reuse or share syringes, cookers, cotton, or water. Don't frontload or backload.
- If you have one steady sex partner, there is a very low chance of giving hepatitis C to that partner through sexual activity. Therefore, you do not need to change your sexual practices. Consider discussing the need for hepatitis C counseling and testing with your partner.

- If you want to lower the chance of spreading hepatitis C to your sex partner you should use latex condoms during sexual activity.
- If you are having sex with more than one partner you should use a latex condom to avoid the spread of hepatitis C and other sexually transmitted diseases.

**Who should be screened for hepatitis C infection?** The Seattle-King County Department of Public Health (SKCDPH) provides screening for persons at high risk for hepatitis C infection and **who do not have another source of health care**. This includes persons who:

- were notified that they received blood or blood products from a donor who later tested positive for hepatitis C.
- received a transfusion of blood or blood components (including during childbirth) before July, 1992.
- received a solid organ transplant before July, 1992.
- have ever injected illegal drugs.
- received clotting factor concentrates before 1987.
- have ever been on long-term kidney dialysis.
- are health-care workers and have had needle-stick, sharps, or mucosal exposures to HCV-positive blood.
- are children born to an HCV-positive women.
- have persistently abnormal alanine aminotransferase levels in the absence of another explanation.

**SKCDPH does not provide hepatitis C screening for persons at low or undefined risk for hepatitis C infection:**

- The risk of acquiring hepatitis C through sexual activity is uncertain but apparently minimal. SKCDPH does not recommend hepatitis C testing for persons with multiple sex partners or those with a history of sexually transmitted diseases, in the absence of other established risk factors.
- The risk of hepatitis C among long-term steady sex partners of someone with known hepatitis C infection appears to be low (CDC estimate: 1.5%) and routine testing for hepatitis C is not recommended.
- The risk of acquiring hepatitis C through body piercing and tattooing is unknown and SKCDPH does not recommend testing for persons with body piercing or tattoos in the absence of other established risk factors.
- The risk of hepatitis C infection from intranasal cocaine use (snorting) is not known. SKCDPH does not recommend hepatitis C testing for persons with a history of intranasal cocaine use in the absence of other established risk factors.
- The risk of acquiring hepatitis C through transplanted tissue (e.g. corneal, musculoskeletal, skin, ova, sperm) is unknown and SKCDPH does not recommend testing persons who are recipients of transplanted tissue in the absence of other established risk factors.

- Persons who do not meet the criteria for testing by SKCDPH and still desire screening may seek testing from private providers in the community on a fee for service basis (see referral list, below).

### **Where is the screening test for hepatitis C infection provided?**

Hepatitis C screening can be obtained through most private primary care physicians in Seattle-King County. If you have medical insurance, the cost of hepatitis C testing may or may not be covered – check with your provider or insurer. SKCDPH will perform hepatitis C screening tests for persons who are at high-risk for hepatitis C (as defined above) and who do not have another source of health care. Persons with a positive screening test will be referred to a health care provider outside the health department specializing in hepatitis C infection for confirmatory testing if needed and in some cases, for clinical follow-up. Confirmatory testing (RIBA, PCR) will not be routinely available through SKCDPH. Hepatitis C screening and counseling should be performed within the framework of current practice guidelines at clinic sites. Persons with risk factors for hepatitis C infection can be screened at a variety of locations including:

- Private medical providers (especially physicians practicing primary care internal medicine and family practice)
- Harborview Medical Center's Madison HIV Clinic (for persons with HIV infection or desiring HIV testing also): (206) 731-5100
- Harborview Medical Center's Infectious Diseases Clinic: (206) 731-5169
- Harborview Medical Center's Urgent Care Clinic: (206) 731-5867
- For children: Children's Hospital and Medical Center
- Gastroenterology (GI) clinic: (206) 526-2521
- Seattle-King County Department of Public Health Clinic sites: Please check your local health department site for current availability of HCV screening.

### **Where is confirmatory testing and clinical follow-up and treatment provided for persons with a positive hepatitis C screening test?**

- Private medical providers (including physicians practicing gastroenterology and infectious disease medicine)
- Harborview Medical Center's Hepatology (Liver) Clinic: (206) 731-4192
- Harborview Medical Center's Infectious Diseases Clinic: (206) 731-5169
- University of Washington Medical Center Hepatology (Liver) Clinic: (206) 548-4886
- For children: Children's Hospital and Medical Center Gastroenterology (GI) clinic: (206) 526-2521.

### **Where can I obtain additional information about hepatitis C?**

The American Liver Foundation: 1-800-GO LIVER (465-4837); 1-888-4 HEPABC (443-7222); <http://www.liverfoundation.org>.

Hepatitis Foundation International: 1-800-891-0707;  
<http://www.hepfi.org>.

Centers for Disease Control, Hepatitis Branch: 1-888-443-7232;  
<http://www.cdc.gov/ncidod/diseases/hepatitis/hepatitis.htm>.

Seattle Community Network Hepatitis Education Project: (206)  
447-8136; <http://www.scn.org/health/hepatitis>.

National Foundation for Infectious Diseases (NFID):  
(301) 656-0003; <http://www.nfid.org/>.

American College of Gastroenterology (ACG): (703) 820-7400;  
<http://www.acg.gi.org/>.

National Digestive Diseases Information Clearinghouse (NDDIC):  
(301) 654-3810; <http://www.niddk.nih.gov>

Seattle-King County Department of Public Health, Communicable  
Disease Epidemiology: (206) 296-4774.

**I heard that there are support groups to help people who are  
infected with hepatitis C. How can I find out about these?**

Hepatitis Education Project  
4603 Aurora Ave. N  
Seattle, WA 98103  
(206) 732-0311  
[http://www.scn.org/health/hepatitis/  
hep@scn.org](http://www.scn.org/health/hepatitis/hep@scn.org)

Hepatitis Foundation International  
1-800-891-0707  
30 Sunrise Terrace  
Cedar Grove, NJ 07009-1423  
<http://www.hepfi.org>  
[hfi@intac.com](mailto:hfi@intac.com)